L 6353-66

ACC NR: AP5020362

molecules of the beam interact with the travelling waves which are established in the resonator. When the value of the parameter  $\alpha$  given by the expression

$$\alpha_{1} = \begin{cases} 4u/\chi\eta + 0.77 & \text{iipii } \alpha_{1} > 0 \\ 4u/\chi\eta - 0.77 & \text{iipii } \alpha_{1} < 0 \end{cases}$$

is approximately equal to -1 there is a resonant exchange of energy between the beam molecules and the backwave while a weak (nonresonant) energy exchange occurs between the molecular beam and the forward wave. In the region where a is approximately equal to 1, the situation is reversed: the molecular system undergoes intense transitions under the action of the direct wave field. The exact conditions under which the frequency of oscillations undergoes a discontinuity can be established from stathe frequency of oscillations undergoes a discontinuity can be established from stability considerations. The analysis of stability is very cumbersome and is not presented in the article. However, its results are used to consider the case of sinusoidal distribution of the resonator field. Orig. art. has: 24 equations and 3 figures.

SUB CODE: EM,GP/ SUBM DATE: 18Sep64/ ORIG REF: 007/ OTH REF: 001

**Card** 2/2

L 42285-66 FBD/EWT(1)/EEC(k)-2/T/EWF(k) IJF(c) WG

ACC NR. AP5022792 SOURCE CODE: UR/0141/65/008/004/0688/0698

AUTHOR: Tsaregradskiy, V. B.

ORG: Gor'kly State University (Gor'kovskiy gosudarstvennyy universitet)

TITLE: Interaction of a molecular beam with the electromagnetic field of a resonator. III. Stability of oscillations of a maser with an inhomogeneous field

SOURCE: IVUZ. Radiofizika, v. 8, no. 4, 1965, 688-698

TOPIC TAGS: maser, resonator, escillation, molecular beam & ELECTROMAGNETIC FIELD, RESONATOR OSCILLATION

ABSTRACT: The stability of a maser with an arbitrary inhomogeneous field is examined in this article. A characteristic equation is derived on the basis of the field expansion of molecular beam polarization and its solution for any mode of oscillations in the resonator is found. The stability of two auto-oscillatory cycles in the maser with a sinusoidal distribution of the field along the axis of the beam is investigated as an example. A numerical calculation of the roots of the characteristic equation made it possible to establish the presence of a hysteresis transition between the auto-oscillatory cycles in the generator. Orig. art. has: 3 figures and 26 formulas.

SUB CODE: 20/ SUBM DATE: 14Dec64/ ORIG REF: 001 UDC: 621.378.33

# "APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001756920002-9

EEC(k)-2/EMA(h)/EMA(k)/EMP(k)/EMT(1)/FBD/I/EMA(m)-2 SCTB/IJP(c) L 6303-66

ACC NR: AP5026707 SOURCE CODE: UR/0141/65/008/005/0920/0923

AUTHOR: Tsaregradskiy, V. B. 14

Gorkiy State University (Gor'kovskiy gosudarstvennyy universitet) ORG:

TITLE: Maser with a sinusoidal field distribution. Part 4. Case of arbitrary mag-

nitude of the field

SOURCE: IVUZ. Radiofizika, v. 8, no. 5, 1965, 920-923

TOPIC TAGS: maser theory, resonator

ABSTRACT: The problem of a maser with a sinusoidal distribution of the resonator field, which is inhomogeneous and has an arbitrary amplitude along the axis of motion of the molecules, is considered for large values of the excitation parameter xn. The solution is based on the expression for the polarization found earlier (V. B. Tsaregradskiy, Izv. vyssh. uch. zav. - Radiofizika, 6, 275, 1963), and on equations for stationary amplitudes and phases (Idem. Ibid. 8, 504, 1965). The amplitude and frequency characteristics of the maser are derived, and the existence of two selfoscillatory regimes with different frequencies is demonstrated. The solution found

Card 1/2 UDC: 621.378.33

CIA-RDP86-00513R001756920002-9" **APPROVED FOR RELEASE: 03/14/2001** 

L 6303-66

ACC NR: AP5026707

shows that all the phenomena are covered by the theory formulated earlier; the only difference pertains to the amplitude-frequency characteristics, but even in this case it does not exceed 20 to 25%. Orig. art. has: 2 figures and 9 formulas.

SUB CODE: EC/ SUBM DATE: 22Mar65/ ORIG REF: 005/ OTH REF: 000

Card 2/2 R.D.S.

ACC NR: AP7001215 SOURCE CODE: UR/0141/66/009/006/1134/1141

AUTHOR: Tsaregradskiy, V. B.

ORG: Gor'kiy State University (Gor'kovskiy gosudarstvennyy universitet)

TITLE: Some applications of the generalized Kallen-Velton(?) theorem to the calculation of fluctuation characteristics of quantum devices

SOURCE: IVUZ. Radiofizika, v. 9, no. 6, 1966, 1134-1141

TOPIC TAGS: quantum device, quantum amplifier, quantum generator

ABSTRACT: The generalized Kallen-Velton theorem is used for evaluating the fluctuation in quantum amplifiers and generators. A formula for the spectrum of power of the beam noise (spontaneous radiation) is derived. This permits calculating the spectral energy of noise in the maser circuit: the result coincides with that of a rigorous analysis of a quantum-mechanics system of equations.

Card 1/2 UDC: 621.378.001.24

ACC NR: AP7001215

This proves the applicability of the K-V theorem to calculating noise in a quantum generator. Finally, the maximum width of the spectral line (due to spontaneous radiation) is evaluated. Comparison with some published results of other Soviet researchers proves that: (a) the simplifying assumptions made by the author in his deduction of the K-V formula (IVUZ. Radiofizika, 4, 508, 1961) were valid and (b) all methods of evaluation of quantum fluctuation result in approximately the same values of the spectral-line width. Orig. art. has: 44 formulas.

SUB CODE: 20 / SUBM DATE: 18Feb66 / ORIG REF: 010 / OTH REF: 001

Card 2/2

Interaction letteen a nolocular beam and the microtroragnetic field of a resonator. Part 3: Stability of the oscillations of a molecular generator with an ichorageneous field. Inv. vys. ucheb. nav.; radicfiz. 8 no.41692609 let.

1. Gertkevskiy genularstvennyy universitat.

(Mira 19.6)

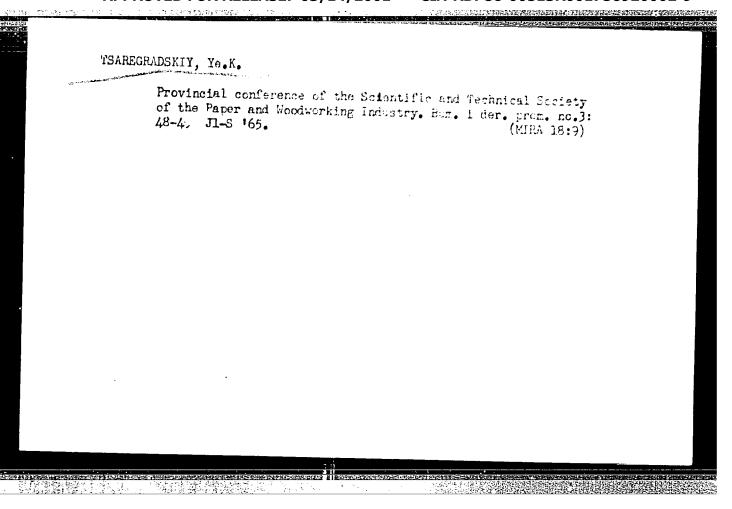
APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

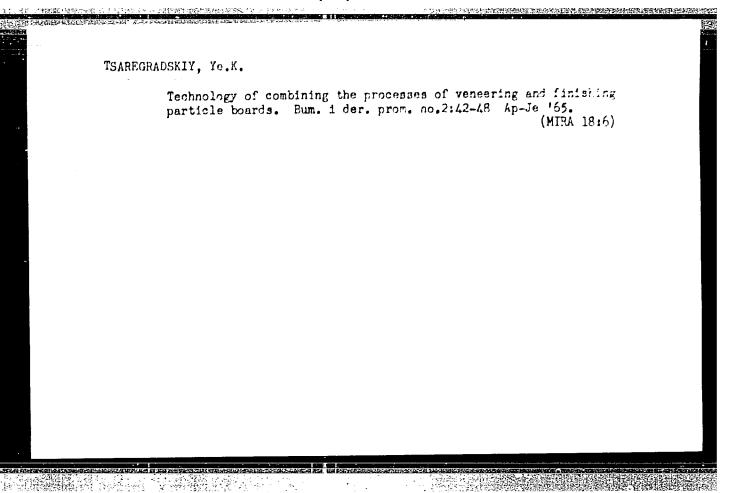
The state of the s

THEORY of flactuations of a molecular generator. Law. wys. uches.

zav.; radiofiz. 7 no.6:1975-1089 '64. (MIRA 18:4)

1. Gor'kovskiy gosudarstvennyy universitet imeni Lobachevskogo.





TSARECRADSKIY, Yuriy Aleksandrovich, burovoy master; MIKHEYEV, N.I., red.; DURASOVA, V.M., tekhn. red.

[Rapid drilling of deep wells] Skorostnaia provodka glubokoi skvazhiry. Kuibyshev, Kuibyshevskoe knizhnoe izd-vo, 1962. 19 p. (MIRA 17:1)

1. Master pervoy kontory bureniya tresta "Pervomayburneft'", Kuybyshevskaya oblast' (for TSaregradskiy).

KOLESNIKOV, Yu.A., insh.; KHARCHENKO, R.O.; TSAREGRADSKIY, Ye.K.

TO THE PROPERTY OF THE PROPERT

Lacquers made from birch tar for furniture finishing. Der. prom. 9 no.4:15-16 Ap '60. (MIRA 13:9)

1. TSentral noye mebel no-konstruktorskoye byuro Ukrpromsoveta. (Lacquer and lacquering)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

KHARCHENKO, R.I.; TSAREGRADSKIY, Ye.K.

Improving the production of birchbark tar. Gidroliz i lesokhim.
prom. 13 no.2:12-13 '60. (MIRA 13:6)

1. TSentral'noye mebel'noye konstruktorskoye byuro Ukrpromsoveta.
(Wood tar)

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EHARCHENKO, R.I., inzh.; TSAREGRADSKIY, Ye.K., inzh.

Birch tar as a substitute for shellac. Der.prom. 8 no.3:22 Mr '59.

(MIRA 12:4)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

KIRILLOV, V.S., dotsent; TSAHENKO, A., veterinarnyy vrach.

Milk therapy for cows in parturient paresis and mechanism of its function. Veterinariia 30 no.12:36-39 D 53. (MLRA 6:11)

1. Moskovskiy khimiko-tekhnologicheskiy institut myasnoy promyshlennosti.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

TSAPERAO, A. (Veterinarian, Moscow Chemo-Technological Institute of Meat Industry).

Milk therapy in birth paresis and the mechanism of its action.

So: Veterinariya; 30; 12; December 19:3; Uncl.

TABCON

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NICHKOV, I.P.; RASPOPIN, S.P.; TSAHENKO, A.F.

State of zinc in fused chlorides. Izv. vys. uchob. zav.; tsvot. met.
5 no.5:89-92 '62. (MIRA 15:10)

1. Ural'skiy politekhnicheskiy institut.
(Zinc—Electric properties) (Fused salts)
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MICHKOV, I.F.; RASPOPIN, S.P.; TSASEHERU, a.F.

Uranium displacement by zinc from chloride melts. Atom. energ. 15 (MIRA 16:10) no.4:336-337 0 '63.

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NICHKOV, I.F.; RASPOPIN, S.P.; TSARENKO, A.F.

State of zince in fused chlorides. Izv. vys. ucheb. zw.; tsvet. met.
5 no.5:89-92 '62.

1. Ural'skiy politekhnicheskiy institut.
(Zinc-Electric properties) (Fused salts)

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サンチモセドチャ みん

KRASIL'NIKOV, Petr Kuz'mich; MASLOV, Roman Platonovich; TSARENKO, A.P., redaktor; BOBROVA, Ye.H. tekhnicheskiy redaktor

[Organization of shipper's special destination trains with separate railroad car units; the work practice of the Uzlovaya section of the Moscow-Kursk-Denbass linel Organizatsiia otpravitel'skikh marshrutov iz razroznennogo vagonopotoka; opyt raboty Uzlovskogo otdeleniia Moskovsko-Kursko-Denbasskoi dorogi. Moskva, Gos. transp. zhel-dor. izd-vo, 1957.
23 p. (MIRA 10:4)

(Railroads -- Making up trains)

POKAVKIN, Vladimir Alekseyevich; POPSPIEV, Anatoliy Vasil'yevich;
KHAIT, Etel' Isaakovna; TSARENKO, A.P., redaktor; BOBROVA,
Ye.H., tekhnicheskiy redaktor.

[Futting through local and destrict freight by through trains]
Frodvizhenie mestnogo i uchastkovogo gruza transitnymi poezdami. Moskva, Gos.transp.zhel-dor.izd-vo, 1957. 41 p.

(MLRA 10:6)

(Railroads--Freight)

POVOROZHENKO, Vladimir Vasil'yevich, doktor tekhn.nauk, prof.; PETRISHIN, Lev Leont'yevich, dotsent; STEFANOV, Nikolay Yakovlevich, dotsent; BOROVOY, Natan Yefimovich, dotsent; GALATCHENKO, Nikolay Prokof'yevich, dotsent; TSARENKO, A.P., inzhener, red.; BOBROVA, Ye.N., tekhn.red.

- I.Z. - '- - u,

[Organization of traffic in railroad transportation] Organizatsiia dvizheniia na zheleznodorozhnom transporte. Pod obshchei red. V.V.Povorozhenko. Moskva, Gos.transp.zhel-dor.izd-vo, 1957. 362 p. (MIRA 10:12)

(Railroads--Traffic)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

(RIMEVICH, Georgiy Petrovich, prof., doktor tekhn.nauk; TSARENKO, A.P., red.;

VERIMA, G.P., tekhn.red.

[Warehouses and the mechanization of loading and unloading operations in reilroad transportation] Sklady i mekhanizatsiis pogruzochno-razgruzochnykh rabot na zheleznodorozhnom transporte. Izd. 3-e. ispr. i dop. Moskva, Gos.transp.zhel-dor. izd-vo, 1957. 471 p. (Loading and unloading) (MIRA 11:2)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

BADYUL, Boris Konstantinovich; LYASHENKO, Yakov Timofeyevich; TSARTUKO, A.P., red.; BOBROVA, Ye.N., tekhn. red.

[Increasing static and dynamic loads of cars; practices of the Dnepropetrovsk station of the Stalin Railroad] Povyshenie staticheskoi i dinamicheskoi nagruzki vagonov; opyt stantsii Dnepropetrovsk Stalinskoi dorogi. Moskva, Gos. transp. zheldor. 1958. 19 p. (MIRA 11:7)

(Dnepropetrovsk--Railroads--Cars)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

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AGRANAT, Pavel Abramovich,; ZOZOVSKIY, Abram L'vovich,; TSARERKO, A.P., red.; VERINA, G.P., tekhn. red.

[Recent developments in the operation of stations and spur lines; experience of the Vinnitss Economic Council and the Southwestern Railroad] Novoe v rabote stantsii i podMezdnykh putei; opyt Vinnitskogo sovnarkhoza i IUgo-Zapadnoi dorogi. Moskva, Gos. transp. zhel-dor. izd-vo, 1958. 19 p. (MIRA 11:11) (Railroads--Management)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

BUKANOV, Mikhail Aleksandrovich,; TSARENKO, A.P., red.; VERINA, G.P., tekhn. red.

[Switchman's manual] Pamiatka strelochniku. Moskva, Gos. transp.
zhel-dor. izd-vo, 1958. 46 p. (MIRA 11:12)

(Railroads--Switchin--Handbooks, manuals, etc.)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

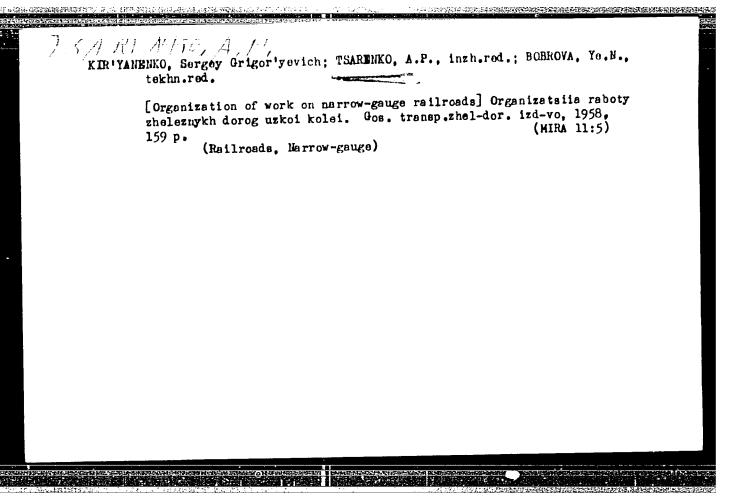
TO THE STATE OF THE PROPERTY O

KONSTANTINOV, A.N., SUKHOTSKIY, M.L., SUKACHIV, V.V., KAMYSHANOV, G.I.,
TSARINKO, A.P., red.; KHITROV, P.A., tekhnored.

[Advanced work methods for passenger service personnel] Peredovye
metody truda passazhirskikh rabotnikov. Moskva, Gos.transp. zhel-dor.
izd-vo. 1958-91 p. (MIRA 11:7)

izd-vo. 1958. 91 p.
(Railroads--Employees)
(Railroads--Passenger traffic)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"



OF THE STREET STREET, STREET,

SMEXHOV, Anatoliy Alekseyevich, kand. tekhn. nauk; TSARENKO, A.P., red.; BOBROVA, Ye.N., tekhn. red.

[Railroad freight yards and warehouses in foreign countries]
Gruzovye dvory i sklady zheleznodorozhnykh stantsii za rubezhom.
Moskva, Gos. transp. zhel-dor. izd-vo, 1958. 173 p. (MIRA 11:7)
(Warehouses) (Railroads--Yards)

BARTHNEY, Prokofiy Vasil'yevich, prof., doktor tekhn. nauk; PARFENOY, Viktor Prokhorovich, dots., kand. tekhn. nauk; PODKALINER, S.N., dots., kand. tekhn. nauk; IABAZIN, P.S., dots.; LYAKHNITSKIY, V.Ye., prof., doktor tekhn. nauk; zasluzhenryy deyatel' nauki i tekhniki, red.; SOLOV'YHV, A.F., inzh., red.; TYUMENHY, N.A., inzh., red.; HOVIKOV, A.A., glavnyy marshal aviatsii, red.; TEPLITSKIY, A.V., glavnyy inzn., red.; TSARENKO, A.P., red.; KHITROV, P.A., tekhn. red.

[Water, road, air, and industrial transportation] Vodnyi, avtodorozhnyi, vozdushnyi i promyshlennyi transport. Moskva, Gos. transp. zhel-dor. izd-vo, 1958. 303 p. (MIRA 11:10)

1. Leningradskoye otdeleniye instituta proyektirovaniya promyshlennogo transporta (for Teplitskiy). (Transportation)

BOGDANOV, Igor' Aleksandrovich; TSARENKO, A.P., inzh., red.; MEDVEDEVA, N.A., tekhn.red.

[Cooperation practices between railroad sections and Economic Councils] Opyt sodruzhestva otdelenii dorog i sovnarkhozov.

Moskva, Gos.transp.zhel-dor.izd-vo, 1959. 41 p. (MIRA 13:1)

(Railroads---Management)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

SHEKHTMAN, Aron Isaakovich; ERLIKH, Moisey Davidovich; PROK, Boris Mikhaylovich; TSARENKO, A.P., red.; KHITROV, P.A., tekhn.red.

[Promoting the efficiency of freight transportation; from the practice of economic councils and railroads] Opyt ratsionalisatsii perevosok grusov; is praktiki sovnarkhosov i zhelesnykh dorog. Moskva, Gos.transp.zhel-dor.izd-vo, 1959. 55 p. (MIRA 12:7)

(Freight and freightage)

(MIRA 12:6)

MAKAROV, Anatoliy Matveyevich; TSARENKO, A.P., red.; BOBROVA, Ye.N., tekhn.red. [Intensified loading of timber into railroad cars] Uplotnennaia zagruzka vagonov lesomaterialami. Moskva, Gos.transp.shel-dor.

izd-vo, 1959. 58 p.
(Loading and unloading) (Lumber--Transportation)

CIA-RDP86-00513R001756920002-9" **APPROVED FOR RELEASE: 03/14/2001** 

- Company of the Comp

NEKHUTMAN, Semen Veniaminovich; OSADCHUK, Grigoriy Ivanovich; SKRIPKIN, Viktor Vasil'yevich; TSARENKO, A.P., red.; BOBROVA, Ye.N., tekhn.red.

[Experience in transporting perishable freight; practices of the depot of refrigerated trains in the Moscow suburban station]
Opyt perevoski skoroportiashchikhsia grusov; is praktiki depo refrisheratornykh poezdov stantsii Podmoskovnaia. Moskva, Gos. transp.zhel.-dor.isd-vo, 1959. 96 p.

(MIRA 12:6)

(Rnilroads--Freight)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

- CONTRACTOR Extended and a second se

(MIRA 12:4)

SAMSONOV, Aleksey Vasil'yevich; LOGINOV, Nikolay Grigor'yevich; TSARENKO,

A.P., red.; BOBROVA, Ye.N., tekhn.red.

[Labor protection and safety measures in railroad traffic]
Okhrana truda i tekhnika bezopasnosti v khoziaistve dvizheniia zhelez-

nykh dorog. Moskva, Gos. transp. zhel-dor. izd-vo, 1959. 190 p.

(Railroads -- Safety measures)

AKIMOV, M.I.; VOLKOV, S.P.; KONOVALOVA, N.A.; OSINOVSKAYA, R.I.; PLISKO, YU.IU.; SEVEROV, M.N.; STEPANOV, L.A.; SECHUKIN, V.Ia.; VOROMICHEV, M.P., red.; TSARKEKO, A.P., red.; VERIMA, G.P., tekhn.red.

[International railroad transportation] Mezhdunarodnye zheleznodorozhnye soobshcheniia. Pod red. M.P.Voronicheva. Moskva, Gos. transp.zhel-dor.izd-vo.1959. 242 p. (MIRA 13:2)

(Railroads)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

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LEBEREVA, Tat'yana Petrovna; UMAESKII, Grigoriy Markovich; TSARENKO,

A.P., red.; KHITROVA, N.A., tekhn.red.

[Television at railroad stations] Televidenie na shelesnodoroshnykh stantsiiakh. Moskva, Gos.transp.shel-dor.izd-vo,
(MERA 13:3)

(Television) (Railroads—Electronic equipment)

BERLYAND, Aleksandr Usherovich, .inzh.; TSARENKO, A.P., inzh., red.; KHITROV, P.A., tekhn.red. [Switchman's manual] Rukovodstvo strelochniku. Izd.3. Moskva. Vses.izdatel'sko-poligr.obedinenie M-va putei soobshcheniia.
1960. 254 p. (MIRA 13:5) 1960. 254 p. (Railroads--Switches) 是**不是国家的**是不是不是一个

> CIA-RDP86-00513R001756920002-9" **APPROVED FOR RELEASE: 03/14/2001**

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L 2*126-66 EWT	(m)/EWP(1) IJP(c) 5 SOURCE CODE:	UR/0120/65/000/006/0023/0026	3
	y, I. B.; Kazanskiy, G. S.; M., Tsarenkov, A. P.	ikhaylov, A. I.; Myznikov, K. P.	÷
ORG: Joint Nuclear	Research Institute (Ob"yedine	nnyy institut yadernykh issledovar	niy)
TITLE: Programin experiments	ig the operation of the OIYaI pr	oton synchrotron for physical	
SOURCE: Pribory	i tekhnika eksperimenta, no. 6	, 1965, 23-26	
TOPIC TAGS:	synchrotron, proton beam, co	mputer programming	ļ
physical experimen subble-chambers as system was develop command unit, a ta function manipulato of the beam to vario	ed which consists of a 7-channe rget-control unit, field sensors	psec) bursts of particles for pulses for counters. A programial operation-sequence unit, a supply-control unit, and aged for slow and fast application	
<b>SUB CODE: 18, 09</b>	/ SUBM DATE: 200ct64 / OI	RIG REF: 006	
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L 09/49-67 Edr(m) IJP(c) ACC Nat AP0035869

SOURCE CODE: UR/0413/66/000/020/0087/0087

INVENTOR: Kazanskiy, G. S.; Tsarenkov, A. P.

ORG: none

TITLE: A method of dynamically controlling parameters of an accelerated particle beam in the acceleration stage. Class 21, No. 187180. [announced by the Joint Institute of Nuclear Research (Ob"yedinennyy institut yadernykh issledovaniy)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 20, 1966, 87

TOPIC TAGS: particle acceleration, particle accelerator, plasmoid acceleration, particle beam

ABSTRACT: An Author Certificate has been issued for a method of dynamically controlling the parameters of an accelerated particle beam during the acceleration cycle by using inductive electrodes. To continuously observe both the phase size of the accelerated charged particle bunch and the degree of energy homogeneity of the beam of charged particles trapped under synchrotron conditions, signals from transducers are passed through a system of slotted-type wideband amplifiers tuned to a voltage which approaches the pulse base. The pulses reflect the phase size and keep the pulse amplitude constant through an input unit containing an automatically controlled wideband amplifier which restores pulse amplitude when the intensity is varied.

SUB CODE: -09/ SUBM DATE: 26Apr63/ ATD PRESS: 5105

Card 1/1 327 UDC: 621.384.66

DOLGOV, K.A., TSARENKO, I.M.

Obtaining straw collulose for chemical processing. Bum. 1 der. prom. no.4:48-50 O-D \*65. (MIRA 18:12)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

### "APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9

TSARENKO, N.Ya.; GEORGIYEVSKIY, V.P., SHRAYBER, M.S.

Quantitative determination of the sum of alkaloids in the roots of Rauwolfia serpentina. Apt. delo 14 no.5:49-51 S-0 '65.

(MIRA 18:11)

1. Khar'kovskiy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

L 2279-66 EWT(m)/EPA(w)-2/EWA(m)-2 IJP(c) DM

ACCESSION NR: AP5016923 UR/0089/65/018/006/0555/0559

621.384.611

AUTHOR: Kazanskiy, G. S.; Mikhaylov, A. I.; Rubin, N. B.; Tsarenkov, A. P.

TITIE: Phase bunching of a beam of charged particles during capture in the acceleration process in the OIYAI proton synchrotron

SOURCE: Atomnaya energiya, v. 18, no. 6, 1965, 555-559

TOPIC TAGS: particle acceleration, bev accelerator, cyclic accelerator, proton accelerator, proton beam

ABSTRACT: A method for increasing the capture by turning on beforehand a high-frequency accelerating field is proposed. The frequency of the accelerating field is varied to match deflection of the orbit in the "quasi-betatron" mode. The capture efficiency is thus increased by bunching the particles in an azimuthal direction. This bunching consists of drawing into the capture process some of the particles which under normal conditions would be outside the stability region. The application of the high-frequency field prior to the injection of the particles produces a phase bunching effect. The efficiency of the phase bunching depends on the width of the energy spectrum and on the angular spread of the injected beam. This phase bunching mode is relatively critical to the tuning. A frequency deviation by

Card 1/2

## "APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001756920002-9

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ACCESSION MR: AP5016923

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0.3% offsets any gain that can be obtained from the capture. Calculation of the bunching effect are presented, and it is concluded that the results can be employed in accelerators designed for long-duration and many-turn injection. "The authors thank A. B. Kuznetsov for a useful discussion and advice, and also G. A. Bokov, G. P. Puchkov, and S. N. Turov of the radio division of IVE OIYAI (Laboratory of High Energy, Joint Institute of Nuclear Research) for help with the investigations of the accelerator mode." Orig. art. has: 6 figures and 6 formulas.

ASSOCIATION: none

SUBMITTED: 24 Jun64

ENCL: 00

BUB CODE: NP

NR REF SOV: 003

OTHER: 000

Cord2/2 DP

L h232-66 EVT(m)/EPA(w)-2/EWA(m)-2 IJP(c) GS

ACCESSION NR: AT5007970

\$/0000/64/000/000/0970/0975

AUTHOR: Kazanskiy, G. S.; Kuznetsov, A. B.; Mikhaylov, A. I.; Tsarenkov, A. P.;
Chekhlov, K. V.; Rubin, N. B.

TITLE: Certain special features governing the adjustment of the acceleration regime on the OIYaI 10-Gev synchrophasotron at

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963. Trudy. Moscow, Atomizdat, 1964, 975-975

TOPIC TAGS: high energy accelerator, proton accelerator, linear accelerator

ABSTRACT: The oscillogram form of the signals recorded by inductive electrodes in the quasi-betatron regime is due to the subsequent entrapment of the particles into acceleration. The signals are proportional to the variation in the density (e. g. of the order of 2.5·10<sup>10</sup> to 5.2·10<sup>10</sup> protons per pulse) of the particles in the quasi-betatron state in the case of multi-rotation injection at the azimuth of the "vertical" induction electrodes (Kazanskiy, G. S., et al. Atomonya energiya 14, 153 (1963)). The oscillograms also indicate the state corresponding to particle storage in the accelerator chamber. Measurements show that a small group of particles, comprising about 0.5% (5·10) protons per pulse) of the total number of particle card 1/3

L 4232-66

ACCESSION NR: AT5007970

ticles injected, takes part in the formation of the signal. The frequencies in the central part of the signal correspond to the frequency of revolution or are multiples of it. The appearance of such frequencies can explain the presence of the charge front during input of the particles into the accelerator chamber (or the formation of the drop in density at the moment of intensive losses at the beginning of injection), and also the amplitudinal nonequilibrium of the injection current from the linear accelerator, if there occur here azimuthal inhomogeneities whose extent is less than the perimeter of the equilibrium orbit. The connection between the form of the high-frequency signal under consideration and the subsequent entrapment of the particles into the synchrotron state is characteristic. If the oscillations close to the "rear" signal front formed by the particles with amplitudes of betatron radial oscillations are damped, then the effectiveness of entrapment decreases, and in the absence of such damping the effectiveness is greater, as shown by the oscillograms. In the case of the "differential" method of signal recording with induction electrodes, signals are observed whose form can be modified from sinusoidal to a series of discrete pulse-formed signals. In most cases (excluding those where the values n are resonant) the general picture represents the result of superposition of this and another group of signals, as seen on os-

Card 2/3

## "APPROVED FOR RELEASE: 03/14/2001

### CIA-RDP86-00513R001756920002-9

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ACCESSION NR: AT5007970

cillograms. The present report discusses the following pertinent topics: quasibetatron state; synchrotron state; system of high-frequency accelerator supply; programming and adjustment of regimes suitable for physical experiments. The authors show that, by combining the various methods of beam cutput against a target and applying one or another method of selection, one can utilize intelligently the intensity in the accelerator cycle, thus ensuring a combination of different physical experiments. Orig. art. has: 6 figures, 6 formulas.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy, Dubna (Joint Institute of Nuclear Research)

SUBMITTED: 26May64

ENCL: 00

SUB CODE: NP

NO REF SOV: 004

OTHER: 000

Card 3/3

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001756920002-9"

Tsarenko, Anaroliy Petrovich

Poyezd otpravlyayetsya v put'. Moskva Tranzheldorisdat, 1962.

141 (1) p. illus., diagrs.

Bibliography: p. (142)

**在是是最高的的**是一种,但是是是是一种,但是是是是一种,但是一种的。

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

TSARENKO, Anatoliy Petrovich

Poyezd otpravlyayetsya v put!. Moskva, Tranzheldorizdat, 1962 141 (I) p. Illus., Diags. Bibliography: p. (142)

AKSENOV, Ivan Yakovlevich; TSARENKO, A.P., inzh., red.; VERINA.
G.P., tekhn. red.

[Brief handbook of the indices of railroad operations]

Kratkii spravochnik pokazatelei ekspluatatsionnoi raboty

zheleznykh dorog. Moskva, Transzhelizdat, 1954. 176 p.

(MIRA 16:7)

(Railroads--Management)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

AKSENOV, Ivan Yakovlevich; SUYAZOV, Ivan Grigor'yevich; KHATSKELEVICH, M.N., redaktor; TSARENKO, A.P., redaktor; VERINA, G.P., tekhnicheskiy

[A manual for the study of the principles of the technical operation of Soviet railroads] Posobie dlia izucheniia pravil tekhnicheskoi ekspluatatsii zheleznykh dorog Soiuza SSR. Izd. 2-ce, perer. i dop. Moskva, Gos. transp.zhel-dor. izd-vo, 1956. 482 p. (MIRA 10:1) (Railroads--Management)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

ANTONIUK, I.D., inghener; ORLOV, V.G.; SAMSONOV, A.V.; TSAREMKO, A.P., redaktor; KHITROV, P.A., tekhnicheskiy redaktor

[Station master's manual] Posobie nachal'niku stentsii. Moskva, Gos.transp.zhel-dor.izd-vo, 1957. 406 p. (MLEA 10:9)

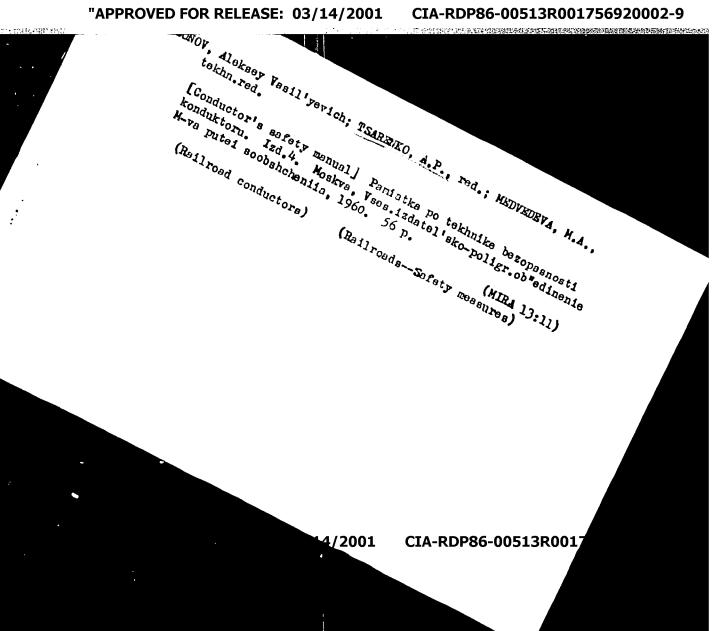
(Railroads--Stations)

SMIRNOV, Petr Alekseyevich; TSAREUKO, A.P., red.; MEDVEDEVA, M.A., tekhn.red.

[Guide on safety engineering for the switchman] Pamiatka po tekhnike bezopasnosti strelochniku. Izd.4, perer. Moskve, Vses.izdatel'sko-poligr.ob"edinenia M-va putei soobshcheniia. 1960. 45 p. (MIRA 13:11)

(Switchmen) (Railroada--Safety measures)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"



TSARENKO, A.P.; BOBROVA, Ye.H., tekhn.red.

[Advanced work methods for reilroad station personnel] Peredovye metody truda na vokzalakh. Moskva, Vses.izdatel'sko-poligr. ob"edinenie H-va putei soobshcheniia, 1960. 66 p.

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FEL'DMAN, H.D.; MEZHOVA, R.V.; SHUL'KO, V.P.; TSARENKO, A.P., red.; BOBROVA, Ye.N., tekhn.red.

[Problems in the standardisation of weight norms and routing of freight shipments] Voprosy unifikatsii vsesovykh norm i marshrutisatsii grusovykh perevosok. Moskva, Vses. izd-ko poligr. ob edinenia m-va putei soob., 1960. 175 p. (Moscow. Vsesoiuznyi nauchno-issledovatel'skii institut sheleznodorozhnogo transporta. Trudy, no.186)

(Railroads--Freight)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

SHATSKAYA, Kleonora Petrovna; KHUDYAKOVSKIY, Yu.K., inzh., retsenzent; TSARENKO, A.P., inzh., red.; MKDVEDEVA, M.A., tekhn. red.

[Practices of the over-all mechanization of the servicing of refrigerator cars] Opyt kompleksnoi mekhanizatsii ekipirovki vagonov-lednikov. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei soobshcheniia, 1961. 29 p. (MIRA 14:6)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

主题的编辑和对于102年已

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SHUTOV, A.I.; OLESHKO, G.I.; ROMANES, G.U., inzh., retsenzent; PERSHIN, B.F., inzh., retsenzent; TSARENKO, A.P., inzh., red.; USENKO, L.A., tekhn. red.

[Improving the technical operation of the Osnova Railroad Station]
Sovershenstvovanie tekhnologii raboty stantsii Osnova. Moskva,
Vses. izdatel'sko-poligr. ob"edinenie M-va putei soobshcheniia,
1961. 34 p.

(Osnova (Kharkov Province) -- Railroads-Stations)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

TSARENKO, A.P., inzh., red.; USENKO, L.A., tekhn. red.

Hermiteante Principal de la company de l La company de la company d

[Creative work of railroad stations employees] Tvorcheskii trud rabotnikov vokzalov. Moskva, Vses. izdatel'sko-poligr. ob\*edinenie M-va putei soobshcheniia, 1961. 41 p. (MIRA 14:12) (Railroads—Employees) (Railroads—Station service)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

RIDEL', Eduard Ivanovich; SHTEFKO, Igor' Vladimirovich; YEFIMOV, G.P., retsenzent; TSARENKO, A.P., red.; MEDVEDEVA, M.A., tekhn. red.

[Transportation of palletized loads] Opyt perevozok gruzov v iashchichnykh poddonakh. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei soobshcheniia, 1961. 47 p. (MIRA 14:7)

(Unitized cargo system)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

GUMENYUK, Nikolay Denisovich; ZOSIMOV, Ye.A., retsenzent; ORLOV, V.M., inzh., retsenzent; TSARENKO, A.P., inzh., red.; KHITROVA, N.A., tekhn. red.

[Work organization in ticket offices] Organizatsiia raboty biletnykh kass. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei soobshcheniia, 1961. 67 p. (MIRA 14:10)

1. Zaveduyushchiy Byuro zakazov na vokzale stantsii Moskva-Pass.--Kurskaya (for Gumenyuk).

(Railroads---Tickets)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

AL'TERMAN, Semen L'vovich; SMETANIN, Aleksandr Ivanovich; MEL'NIK, A.L., kand.tekhn.nauk, retsenzent; SUKACHEV, V.V., inzh., retsenzent; TSARENKO, A.P., inzh., red.; MEDVEDEVA, M.A., tekhn.red.

[Organizing work with local cars] Organizatsiia raboty s mesthymi vagonami. Moskva, Vses.izdatel'sko-poligr.ob"edinenie M-va putei soobshcheniia, 1961. 174 p.

(Railroads—Management)
(Railroads—Freight)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

KOROTKOV, Valentin Nikolayevich; YEFIMOV, G.P., kand. tekhn. nauk, retsenzent; TSARENKO, A.P., inzh., red.; KHITROVA, N.A., tekhn. red.

[Manual for the operator of a gantry crane] Posobie kranovshchiku kozlovogo krana. Izd.2., ispr. i dop. Moskva, Vses. poligr. obnedinenie M-va putei soobshcheniia, 1961. 271 p. (MIRA 14:11)

(Cranes, derricks, etc.)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

2、《李智·唐明·唐明·李明·李明·李明·陈明·福安。》

## "APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9

TSARENKO, Anatoliy Petrovich; AKSENOV, I.Ya., kand. tekhn. nauk, retsenzent; BERNGARD, K.A., prof., doktor tekhn.nauk, retsenzent; GITKOVICH, V.K., red.; USENKO, L.A., tekhn. red.

[A train takes off]Poezd otpravliaetsia v put'. Moskva, Transzheldorizdat, 1962. 141 p. (MIRA 15:10) (Railroads)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

MARINOV, Girsh Ayzikovich; NEKRUTMAN, Semen Veniaminovich; OSADCHUK, Grigoriy Ivanovich; MARTYNOV, M.S., inzh., retsenzent; TSARENKO, A.P., inzh., red.; MEDVEDEVA, M.A., tekhn. red.

[Operation of cars with mechanical refrigeration] Ekspluatatsiia vagonov s mashinnym okhlazhdeniem. Moskva, Transzheldorizdat, 1962. 163 p. (MIRA 15:6)

**APPROVED FOR RELEASE: 03/14/2001** 

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AKSENOV, Ivan Yakovlevich; BOGDANOV, I.A., inzh., retsenzent; TSARENKO, A.P., inzh., red.; USENKO, L.A., tekhn.red.

[Railroad operational indices] Pokazateli ekspluatatsionnoi raboty zheleznykh dorog; kratkii spravochnik. Izd.2., perer. i dop. Moskva, Vses.izdatel'sko-poligr.ob\*edinenie M-va putei soobshcheniia, 1962. 206 p. (MIRA 15:5)
(Railroads—Management)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

BERLYAND, Aleksandr Usherovich; TSARENKO, A.P., inzh. red.; VASIL'YEVA, N.N., tekhn.red.

[Handbook of the switchman] Rukovodstvo strelochniku. Izd.3. Moskva, Transzheldorizdat, 1962. 258 p. (MIRA 15:11)

1. Russia (1923- U.S.S.R.) Ministerstvo putey soobshcheniya. (Railroads-Switches) (Railroads-Signaling)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

SAVCHENKO, Ivan Yefimovich, kend. tekhn. nauk; ZEMBLINOV, Sergey Vladimirovich, doktor tekhn. nauk; STRAKOVSKIY, Isaak Izrailevich, kend. tekhn. nauk; TSARENKO, A.P., inzh., red.; MEDVEDEVA, M.A., tekhn. rad.

[Railroad stations and junctions] Zheleznodorozhnye stantsii i uzly. [By] I.E.Savchenko i dr. Moskva, Transhzheldorizdat, 1962. 410 p. (MIRA 16:2)

(Railroads—Stations)

THE TOTAL CONTROL OF THE PROPERTY OF THE PROPE

BORISOV, Georgiy Nikolayevich; RUSKIN, Serafim Dmitriyevich; ZUBOV, I.V., inzh., retsenzent; TSARENKO, A.P., inzh., red.; USENKO, L.A., tekhn. red.

[Accelerated handling of the flow of local cars; experience of the Moscow-Kursk Division of the Moscow Railroad] Uskorennyi propusk mestnogo vagonopotoka; opyt Moskovsko-Kurskogo otdeleniia Moskovskoi dorogi. Moskov, Transzheldorizdat, 1963. 29 p. (MIRA 16:5) (Railroads--Management)

PERSHIN, Boris Filippovich; CHEKVASKIN, A.P., insh., retsenzent; TSARENKO, A.P., inzh., red.; DROZDOVA, M.D., tekhn. red.

[Operation of traffic-control systems] Ekspluatatsiia marshrutno-kontrol'nykh ustroistv. Moskva, Transzheldorizdat, 1963. 55 p. (MIRA 16:3) (Railroads-Signaling-Centralized traffic control)

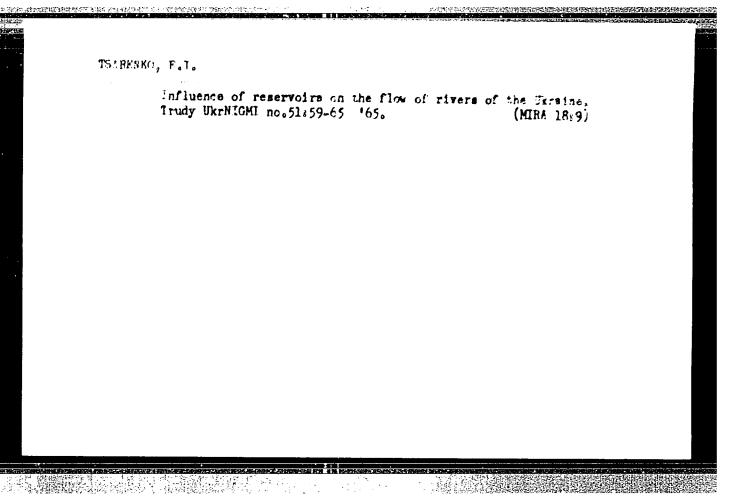
APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

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GUBKOV, Vladimir Vladimirovich; MALAKHOV, Konstantin Nikolayevich; DERIBAS, A.T., inzh., retsenzent; KATOLICHENKO, V.A., inzh., retsenzent; TSARENKO, A.P., inzh., red.; VOROTNIKOVA, L.F., tekhn. red.

[Mechanization of loading and unloading operations on foreign railroads] Mekhanizatsiia pogruzochno-razgruzochnykh rabot na zarubezhnykh zheleznykh dorogakh. Moskva, Transzheldorizdat, 1963. 227 p. (MIRA 16:4)

(Materials handling--Equipment and supplies)
(Automation) (Railroads--Freight)



TSARENKO, F.A., mekhanik relisoukladchik...

14、万代的《新疆教育》(1915年)(1915年)(1916年)(1916年)(1917年)(19

How a track laying machine may be used. Put' i put. khoz. no.5: 27-28 My '57. (MLRA 10:6)

1. Putevaya dorozhnaya mashinnaya stantsiya No.2 Belorusskoy dorogi.

(Railroads--Track)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

TANANAYKO, M.M.; TSARENKO, G.F.

Extraction-photometric determination of titanium (IV) in the presence of iron (III). Ukr.khim.zhur. 30 no.11:1213-1215 \*64.

1. Kjyevskiy gosudarstvennyy universitet im. T.G.Shevchenko.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

## TANANAYKO, M.M.; TSARENKO, G.F.

Solubility of compounds formed in the system titanium (IV) - diantipyrylmethane - thiocyanate. Ukr.khim.zhur. 31 no.5:530-533 165. (MIRA 18:12)

1. Kiyevskiy gosudarstvennyy universitet imeni Shevchenkc. Submitted Oct. 10, 1963.

TSARENKO, I., inzh.

Development of creative initiative is a pledge of success. Avt.transp. 41 no.4:12-13 Ap '63. (MIRA 16:5)
(Rostov-on-Don--Transportation, Automotive)

MARKOV, Yu.N., inzh. (Sverdlovsk); TSAREMKO, L.P., inzh. (Sverdlovsk)

Progressive mechanic and his crew. Put' i put. khoz. 4
no. 12:30-31 D'60. (MIRA 13:12)

(Railroads--Snow protection and removal)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

137-58-4-6805

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 70 (USSR)

AUTHORS: Bergel'son, L.P., Tsarenko, L.V.

TITLE: A Radioactive-isotope Study of the Process of Washing a Gold.

bearing Solution by Means of Filtration, and the Formulation of Recommendations for Reduction of Losses of Dissolved Gold (Izucheniye protsessa otmyvki zolotosoderzhashchego rastvora pri fil'tratsii s primeneniyem radioaktivnykh izotopov i razrabotke rekommendatsiy po snizheniyu poter' rastvorennogo zolota)

PERIODICAL: Tr. n.-i. gornorazved. in-ta "Nigrizoloto", 1957, Nr 22.

pp 158-159

ABSTRACT: Dissolved Au is practically completely washed out (up to 95%.

by 0.75-1 m³ washing solution per ton of dry material, the cake thickness being 6-8 mm and the Au concentration 1-1.5 g/m³ solution. A 5% impairment of the process of washing dissolved Au by filtering is observed when xanthogenate is added. "Nigrizoloto" found, under laboratory conditions, an optimal procedure for washing Au and developed a method of performing radio-isotope analysis. The laboratory data were confirmed with industrial pulp, and the result is that an optimum regime for the filt-

Card 1/1 ering and washing of dissolved Au has been established. G.S

1. Gold--Processes 2. Radioactive isotopes--Applications

s/137/61/000/011/041/123 A060/A101

AUTHORS:

Klimenko, N. G., Tsarenko, L. V.

TITLE:

Technical characteristics and the study of dispersed elements in the

ore of one of the Southern Ural deposits

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 11, 1961, 9, abstract 11664 ("Ir. Tsentr. n.-i. gornorazved. in-ta", 1960, no. 39, 48 - 49)

The main useful components besides Cu are primary sulfides. Of the TEXT: dispersed elements the ones having an industrial value are Se and Te, mainly compounded with FeS2 in the form of isomorphic admixtures. Their separation in independent concentrates is inexpedient because of their fine dispersion and low content. In order to improve the concentration schedule of Sibay ores, it is recommended to add cationite mark KY-1 (KU-1) in the crushing operation in order to ward off the activation of the ZnS, and also crushed cyanide in the proportion 1.5 kg/ton. Anionite mark  $3\Pi II$  -10  $\Pi$  (EPD-10P) may be used for the sorption of excess ions of cyanide. Cyanide in the proportion 50 g/ton is used in the lime medium for a better depression of the pyrite. It is recommended to use  $NH_{\downarrow}Cl$  in

Card 1/2

Technical characteristics and...

S/137/61/000/011/041/123 A060/A101

the metallurgical separation of the Cu and  ${\rm FeS}_2$  concentrates in order to increase the extraction of Se and Te.

A, Shmeleva

[Abstracter's note: Complete translation]

Card 2/2

TSARENKO, M.Ya.; SHRAYBER, M.S.

Fluorometric method for quantitative determination of serrentine. Farmatsev.zhur. 20 no.1:37-39 165.

(MIRA 18:10)

1. Farmakoanaliticheskaya laboratoriya Khar'kovskogo nauchno-issledovatel'skogo khimiko-farmatsevticheskogo instituta.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

TSARENKO, M. Ya.; SHRAYDER, M.S.

Quantitative determination of reservine in complex medicinal mixtures. Farmatsev. zhur. 16 no.6:9-12 '61. (MIRA 15:5)

1. Khar'kovskiy nauchno-issledovatel'skiy khimio-farma tsevticheskiy institut.

(RESERPINE) (COLORIMETRY)

TSARENKO, N.G. (Velikiye Iaki).

Control of tags and of solutions for injections. Apt.delo 2 no.3:31 My-Je
153.

(Solutions (Pharmacy)) (Labels)

TOADSERRO, T. T.

Molecular Physics

Dissembeion: "An Investigation of Next Bristian and Peninters During Motion of A Liquid in Narrow Charmels of a Minit-Angled Section." Cand Jet 5 i,
Kiem Polytechnic Inst, Kiem, 1003. (Referationary Zhurral -- Fizika Moscow,
Mar 54)

S0: 31M 713, 20 Sen 1004

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

SOV/124-57-3-3166

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 3, p 75 (USSR)

AUTHOR: Tsarenko, N. V.

TITLE: On the Nature of the Heat Exchange in Curvilinear Ducts (O

kharaktere teploobmena v krivolineynykh kanalakh)

PERIODICAL: Izv. Kiyevsk. politekhn. in-ta, 1955, Nr 18, pp 358-361

ABSTRACT: On the basis of experimental results on the heat exchange in straight and curved pipes and of a comparative analysis of the kinetic structure of a turbulent fluid flow inside a plane rectangular and square duct the author deduces that the heat exchange occurring under turbulent-flow conditions in the fluid in curvilinear ducts of rectangular section with an elevated ratio of the sides (b/h > 8  $\div$  9) is described sufficiently accurately by the following equation derived for straight ducts:

 $N = 0.023 R^{0.8} P^{0.4}$ 

where N is the Nusselt number, R is the Reynolds number, and P Card 1/1 is the Prandtl number. L. V. Kozlov

SOV/124-57-5-5637

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 5, p 85 (USSR)

AUTHOR: Tsarenko, N. V.

"自己的意思"的"是一个行法

TITLE:

An Investigation of the Heat Transfer in a Turbulent Flow of Liquid Through a Narrow Rectangular Conduit (Issledovaniye teplootdach pri turbulentnom techenii zhidkostey v uzkikh kanalakh pryamougol'nogo secheniya)

PERIODICAL: Izv. Kiyevsk. politekhn. in-ta, 1956, Vol 17, pp 143-153

ABSTRACT: An account is given of the results of an investigation made of the transfer of heat from water undergoing cooling while flowing through a straight rectangular conduit. The Reynolds numbers of the investigated water flows varied within the limits  $1 \times 10^4$  to  $6 \times 10^4$ . The conduits' width/depth ratios ranged from 3:1 to 10:1, their length/ width ratios from 70:1 to 200:1; the minimum conduit width was 1.8 mm. The experimental apparatus used is described, and the author discusses certain aspects of the experimental methods employed. The data yielded by the investigation, and the results of comparison thereof with the findings of other authors, are graphed and reduced

Card 1/2 to formulas. For determining the intensity of the heat-transfer

SOV/124-57-5-5687

An Investigation of the Heat Transfer in a Turbulent Flow of Liquid (cont.)

process the author proposes the formula N = 0.023 R<sup>0.8</sup> P<sup>0.4</sup>, where N is the Nusselt number, R the Reynolds number, and P the Prandtl number. The determining dimension is the equivalent diameter d = 4 f/u, wherein f is the conduit's cross-sectional area and u is the wetted perimeter. The physical constants involved are referred to the mean temperature of the liquid. The influence of the Prandtl number was not investigated. It is noted that free convection does not affect the intensity of the heat-transfer process. No influence either was found to be exerted by that portion of the conduit in which the flow becomes stabilized. The data obtained are observed to agree well with results of investigations made previously relative to the transfer of heat to a flow of air. However, the author's endeavors to account for this agreement in terms of the dissimilar nature of the effect of the temperature on the respective behavior characteristics of true gases and droplet-form liquids are not very convincing.

A. A. Gukhman

Card 2/2

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COUNTRY China CATEGORY H-2 ABS. JOUR. : RZKhim., No. 1959, No. 36 801 AUTHOR : Tuarenke, N. V. INST. TITLE : Dissipation of Heat During Visco-Gravitational Flow of Liquid in Rectangular Channels .. ORIG. PUB. \* Wu li Esuch pao, mota phys. sinica, 1959, 15, No 5, 246-253 : Hesults are considered of experimental studies of heat dissipation from wall to cooling water in straight vertical and herizontal narrow channels of rectangular cross section, during laminar, viceogravitational flow. The influence of thermovinetic, hydrodynamic, and geometrical factors, on heat dissipation, is described. Oriterion equations are presented, which can be used to determine the coefficient of heat dissipation in the calculation of heat-exchangers. From the author's summary. CARD: 161 

SHRAYBER, M.S.; TSARENKO, N.Ya.

Exchange method for the determination of nitro-esters. Med. prom. 15 no.3:42-44 Mr 161. (MIRA 14:5)

1. Khar'kovskiy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut.

(NITRITES)

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29437 \$/081/61/000/017/107/166 B101/B102

AUTHORS:

Shrayber, M. S., Tsarenko, N. Ya.

TITLE:

Volumetric method of determining nitroethers

PERIODICAL:

Referativnyy zhurnal. Khimiya, no. 17, 1961, 401, abstract

17 \( \) 272 (Med. prom-st' SSSR, no. 3, 1961, 42 - 44)

TEXT: The determination is based on the reduction of the nitrogen of the nitroether to NH<sub>3</sub> by means of Devarda's alloy. NH<sub>3</sub> is collected in a receiver by means of 0.1 N H<sub>2</sub>SO<sub>4</sub>. The nonreacting acid excess is titrated with 0.1 N NaOH. Tetranitropentaerythrite and hexanitromannite, new vasodilating agents, were quantitatively determined by this method.

[Abstracter's note: Complete translation.]

Card 1/1

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TSARERKO, N.Ya.; Oktov, Yr.Ye.; CHEATICE, M.S.

Polarographic method of determining agradine, Report Nr.1

Med prom. 17 no.9:38-40 5:63. (Miss 19:5)

J. Khar'kovskiy northeo-isolesovstel'skty Phintis Security of the styring institut.

EACC NRIARGO19861

[N]

SOURCE CODE: UR/0398/66/CCO/CC1/VO12/VO12

AUTHOR: Tsarenko, P. M.

TITLE: Experience in the operation of the automatic remote control system for the R6DV148 engine

SOURCE: Ref. zh. Vodnyy transport, Abs. 1476

REF SOURCE: Proizv.-tekhn. sb. Tekhn. upr. M-va rechn. flota RSFSR, no. 3 (47), 1965, 3-4

TOPIC TAGS: diesel engine, auxiliary ship, remote control system, system reliability, marine engine

ABSTRACT: Motor tugs of Project No. 758 are equipped with automatic remote control [DAU] systems for the R6DV-148 engines. Over a period of five navigation seasons of operating these ships the Omsk Ship Repair Yard has discovered a number of unreliable units in the DAU system. Included among such units are the MET-8/30 tachometer generator, which will not last longer than one or two seasons because of rapid wearing of bearings nos. 6017 and 6010. The MP-1 microswitches at the control stations, and the course cut-out switches, have unreliable mechanical drives, position settings at the control stations are not clear, and access to the adjustment devices is difficult. The power outputs of individual of the electric motors are

Card 1/2

UDC: 621.431.74-519.004.001.5

too low. Repairs and adjustments to the DAU system are made in the yard under wintertime conditions. I figure. [Translation of abstract]				
SUB CODE: 13,21,09	9			
Card 2/2				

TSARENKO, P. P. Cand Agr Sci -- (diss) "The condition and means for the development of the raising of ducks and geose in Laningradskaya Oblast."

Len, 1958. 16 pp (Min of Agr USCR. Lon Agr Inst), 150 copies (KL, 57-58, 108)

**469**3-

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

STORE TSAFELTO, P. P. Tsarenko, P. P. and Mayarovskaya, L. A. "On the roblem of surgical condications of Grimean hemorrhadic fever," Trudy Krymsk. med. in-ta in. Stalina, Vol. VII, 1949, p. 205-10 SO: U-3850, 16 June 53, (Letopsis 'Zhurnal 'nykh Ctater, Mo. 5, 1242)

**APPROVED FOR RELEASE: 03/14/2001** CIA-RDP86-00513R001756920002-9"

字章**是是** 

TSASEURO, P. F.

Tsarenko, P. P. "On early reamputations" Trudy Erossk. med. in-ta im. Stalina, Vol. IV, 1948, p. 211-14

SO: U-3850, 16 June 53, (Letopsis 'Zhurnal 'nykh Sta'ey, No. 5, 1949)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001756920002-9"

Pratnitskiy, M. M. and Tsarenko, F. P. "Academician M. M. Furdenko and Soviet neurosurrery," Trudy Englisk, med. in-ta im. Stalina, Vol. XII, 1986, p. 3-28.

So: M-3850, 16 June 53, (Letonsis 'Zhurnal 'nykh Statey, Mo. 5, 1989)

TSARENKO, P.P.; BIRKUN, A.A.; PASHKOVA, V.S.; USIK, V.D.

Clinical aspects and pathological anatomy of unusual forms of goiter. Probl. endck. i gorm. 6 no.6:80-86 '60. (MIRA 14:2) (GOITER)

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sov/63-4-2-32/39

5(3)

Krasovitskiy, B.M., Pirogova, I.N., Tsarenko, S.V.

TITLE:

AUTHORS:

Vat Dyes Made From Pyrenic Acid

PERIODICAL:

Khimicheskaya nauka i promyshlennosti, 1959, Vol 4, Nr 2,

pp 282-283 (USSR)

ABSTRACT:

The vat dyes were prepared by the condensation of pyrenic acid with ortho-phenylene-diamine and 1,8-naphthylene-diamine. The separation of the dyes into cis- and trans-isomers is not possible, which shows their homogeneity. One dye is an orange powder soluble in concentrated sulfuric acid, pyridine and aniline, the other a dark-green powder

soluble in the same media.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet imeni A.M. Gor'kogo (Khar'kov

State University imeni A.M. Gor'kiy)

SUBMITTED:

September 15, 1958

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